

### **REMARKS**

Reconsideration of the application is respectfully requested for the following reasons:

#### **Rejection of Claims 1-20 Under 35 U.S.C. §103(a)**

Claims 1-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kwon (US 2003/0025163 A1) in view of Murphy et al.(US 6,541,343) and Lee et al.(US 2002/0151145 A1). Claims 2-10 depend from claim 1 and claims 12-20 depend from claim 11.

This rejection is respectfully traversed since the combination of Kwon, Murphy et al. and Lee et al. does not disclose or suggest every element of the claimed invention.

Particularly, the combination of Kwon, Murphy et al. and Lee et al. fails to teach the step of “tilting and implanting said semiconductor substrate with a predetermined angle to form a pocket region on the interface of the lightly doped drain region, said source and drain regions and said semiconductor substrate and under said lightly doped drain region without surrounding said lightly doped drain region, wherein a dosage of said pocket region is less than that of said lightly doped drain region;”. According to MPEP § 2143.03 All Claim Limitations Must Be Taught or Suggested. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

As described in the previous response, the combination of Kwon and Murphy et al. does not disclose or suggest every element of the claimed invention. Moreover, the newly cited art, the patent application of Lee et al., also fails to disclose or suggest the feature which the combination of Kwon and Murphy et al. fails to teach since Lee et al. actually disclose halo regions 28a and 28b which are formed at the interface between the shallow junction areas/extension regions 26a and 26b and the substrate 12 without connecting the source contact region 24a and the drain contact region 24b. That is, the halo regions 28a and 28b of Lee et al. are not formed on the interface of the extension regions 26a and 26b, the source and drain contact regions 24a and 24b and the substrate 12 respectively. Furthermore, the halo regions 28a and 28b are particularly formed at the channel ends to improve the short channel device performance (see paragraph [0006]). Moreover, Lee et al. suggest that one technique for trying to achieve this is the halo technique wherein extra dopant implant regions are next to the sources and drain extension regions (extension regions 26a and 26b, see paragraph [0007]). Therefore, the combination of Kwon, Murphy et al. and Lee et al. does not disclose or suggest every element of the claimed invention. Thus the combination of Kwon, Murphy et al. and Lee et al. is insufficient to render claims 1 and 11 obvious. Moreover, according to MPEP § 2143.03, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. Therefore, the combination of Kwon, Murphy et al. and Lee et al. is also insufficient to render claims 2-10 and 12-20 obvious.

### Conclusion

In light of the above remarks to the claims, Applicant contends that Claims 1-20 are patentable thereover. The claims are in condition for favorable consideration and Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 025796-00013.**

Respectfully submitted,



Rhonda L. Barton  
Attorney for Applicants  
Registration No. 47,271

### **Customer No. 004372**

ARENT FOX PLLC  
1050 Connecticut Avenue, N.W., Suite 400  
Washington, D.C. 20036-5339  
Tel: (202) 857-6000  
Fax: (202) 638-4810

RLB/wbp

Enclosure: Petition for Extension of Time (one month)